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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712.148	11/13/2003	Minoru Sudou	S004-5152	8187

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ADAMS & WILKS  
31st Floor  
50 Broadway  
New York, NY 10004

EXAMINER

NGUYEN, LONG T

ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

4-1

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/712,148	SUDOU, MINORU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Long Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 2-5,7 and 14-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. Claims 1-7 and 10-17 are objected to because of the following informalities:

Claim 1, lines 22-23, it is suggested the recitation “on a voltage of the battery” be changed to --on the voltage across the battery-- to avoid an unclear antecedent basis (see line 7-8 of the claim).

Claim 1, line 24, it is suggested that “of signal” be changed to --of a first signal and a second signal--.

Claim 1, line 24, it is suggested that “terminal;” be changed to --terminal, respectively;--.

Claims 2-7 and 10-17 are objected to because they include the informalities of claim 1.

Claim 2, lines 4 and 11, “n-ch” should be changed to --n-channel--.

Claim 2, lines 5 and 8, “p-ch” should be changed to --p-channel--.

Claim 2, line 7-8, it is suggested to change “a signal based on a voltage of the first terminal” is changed to --the first signal at the first terminal--.

Claim 2, line 9-10, it is suggested to change “a signal based on a voltage of the second terminal” is changed to --the second signal at the second terminal--.

Claim 3, lines 3, 9, 11 and 14, “n-ch” should be changed to --n-channel--.

Claim 2, lines 4, 8, 12 and 15, “p-ch” should be changed to --p-channel--.

Claim 4, lines 2 and 4, “a gate” should be changed to --the gate-- (see claim 2).

Claim 5, line 3, “p-ch” should be changed to --p-channel--.

Claim 5, line 4, “n-ch” should be changed to --n-channel--.

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Claim 6, line 4, "the input terminals" should be changed to --the first and second terminals-- to avoid unclear antecedent basis (see claim 1).

Claim 7, line 4, "the input terminals" should be changed to --the first and second terminals-- for the same reason as in claim 6.

Claims 11 and 12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Note that the recitation "a voltage dividing circuit" in claim 10 is already recited in claim 1; and that the limitation of claim 11 is already recited in claim 6, so it appears that claims 10 and 11 are needed to be canceled.

Claim 13, line 3, "the enhancement" should be changed to --the two enhancement--.

Claims 14 and 16, "the input terminals" recited these claims should be changed to --the first and second terminals-- for the same reason as in claim 6 (see claim 1).

Appropriate correction is required. Note that the above changes are necessary to overcome the unclear languages in the claims so that the claims are clear.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 8 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 8, the recitation “the signal on the input terminals” on line 10 of the claim is indefinite because “the signal” in the above recitation lacks antecedent basis, and it is also unclear whether “the signal” is for which of the input terminals (i.e., there is only a single “signal” while there are plural “input terminals”, so it is not clear the signal is for which one of the input terminals). To overcome this problem, it is suggested to change “the signal on the input terminals” on line 10 of claim 8 to --the voltage across the input terminals--.

Claim 9 is indefinite because it includes the indefiniteness of claim 8.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Ohshima (USP 5,268,595).

With respect to claim 8, Figure 5 of the Ohshima reference discloses a circuit (12, 13, R21, 11a-11c, R23), which includes: input terminals (terminal connected to received Vdd and terminal connected to GND); an output terminal (N21); a reference voltage generator (22) for generating a reference voltage (Vref); a comparator (11a, 11b) for comparing the reference voltage with a voltage across the input terminals and for outputting a comparison signal (the signal connected to gates of Q9 and Q10); a first output circuit (11c) for outputting a first signal (output of 11c); and a second output circuit (R23) for outputting a second output signal (at node N21) that change in value based on voltage of the power supply voltage Vdd (i.e., when the

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value of voltage Vdd changes, then the voltage drops across the resistor R23 changes); and an output terminal (N21) for outputting the first and second output signals (node N21 outputs the first output signal from circuit 11c and the second signal from R23 to down stream circuitry 11d).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 6 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshima (USP 5,268,595) in view of Sudo (US 2002/0140402).

With respect to claim 1, Figure 5 of the Ohshima reference discloses a circuit (12, 13, R21, 11a-11c, R23), which includes: a first terminal (terminal connected to received Vdd); a second terminal (terminal connected to GND); a voltage dividing circuit (13) for dividing a voltage (VDD) across the first and second terminals; a reference voltage (22); a comparator (11a, 11b) and outputs a comparison signal (the signal connected to gates of Q9 and Q10); a first output circuit (11c) for outputting a first signal (output of 11c); and a second output circuit (R23) for outputting a second output signal (at node N21) that change in value based on voltage of the power supply voltage Vdd (i.e., when the value of voltage Vdd changes, then the voltage drops across the resistor R23 changes); and an output terminal (N21) for outputting the first and second output signals (node N21 outputs the first output signal from circuit 11c and the second signal from R23 to down stream circuitry 11d). The Ohshima reference fails to disclose that the voltage Vdd across the first and second terminals is used from a battery. However, the Sudo reference

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discloses that a battery is used as the power supply voltage in an integrated circuit in a portable device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the circuit in Figure 5 of the Ohshima reference by using a battery for power supply voltage Vdd for the purpose of using the circuit in portable device such as in cordless phone or cell-phone. Thus this modification meets all the limitations of claim 1.

With respect to claims 6 and 11, the modification in Figure 5 shows that the first output circuit (11c) comprises two enhancement mode MOS transistors (Q9 and Q10).

With respect to claim 9, this claim is rejected for the same manner as in claim 1, i.e., the modification in claim 1 meets all the limitations of this claim. Note that the input terminals are the first and second terminals as discussed in the rejection of claim 1 above.

With respect to claim 10, the voltage dividing circuit is circuit 13 in Figure 5.

With respect to claim 12, circuit 11c in Figure 5 shows that the two enhancement mode transistors Q9 and Q10 have opposite polarities (one is p-channel and another one is n-channel).

With respect to claim 13, Figure 5 shows the output of the comparator (11a, 11b) connected to the gates of the two enhancement mode transistors (Q9, Q10).

#### ***Allowable Subject Matter***

8. Claims 2-5, 7 and 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 19, 2005



Long Nguyen  
Primary Examiner  
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